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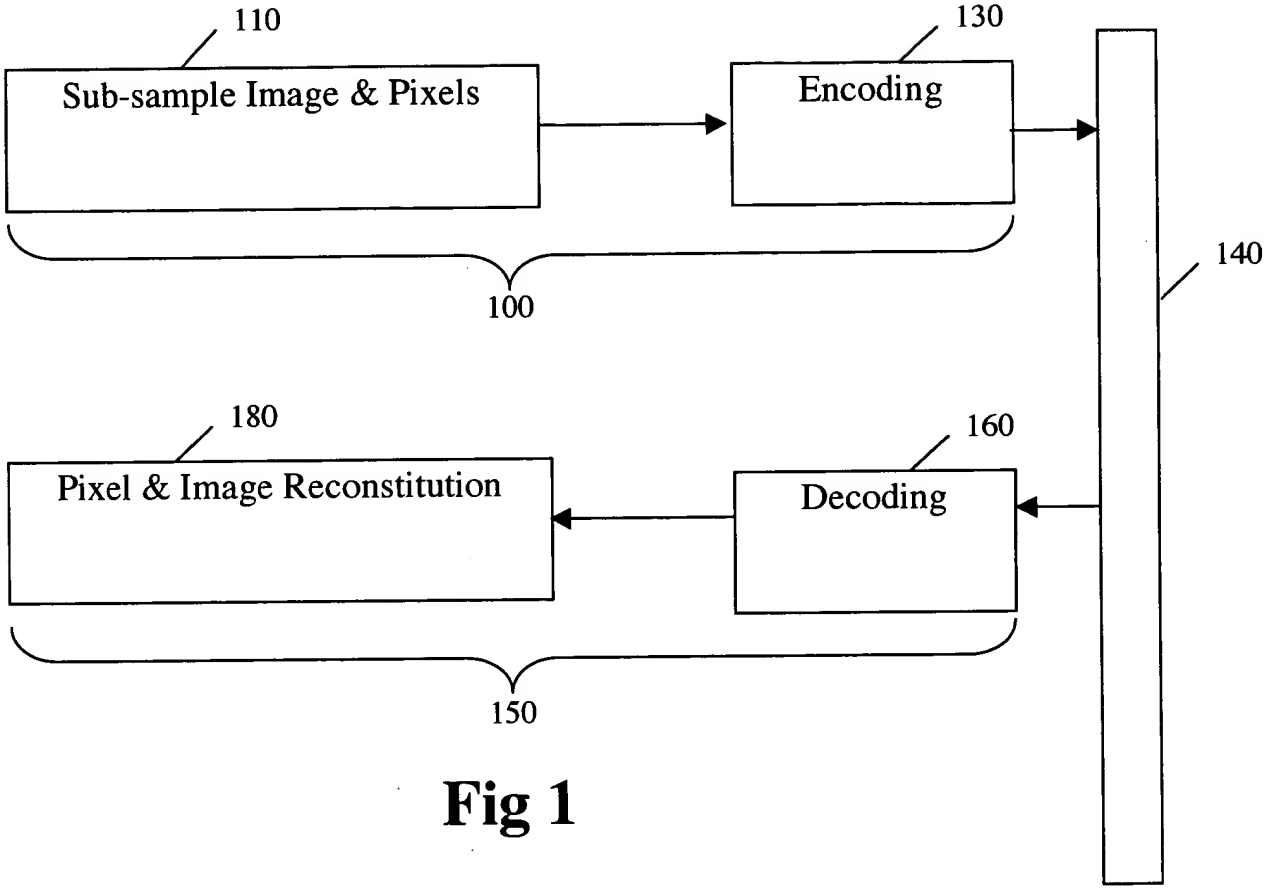


Fig 1

Fig 2A

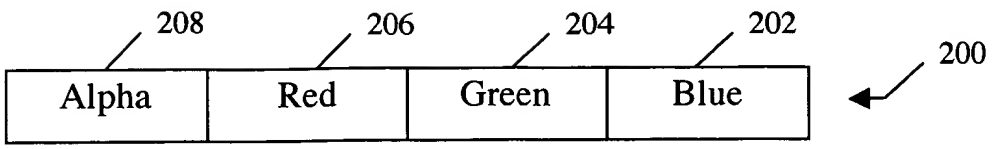


Fig 2B

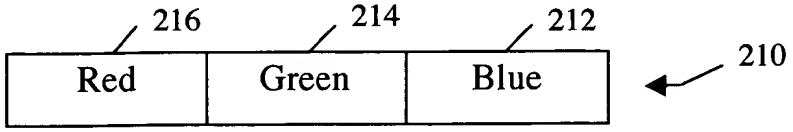


Fig 2C

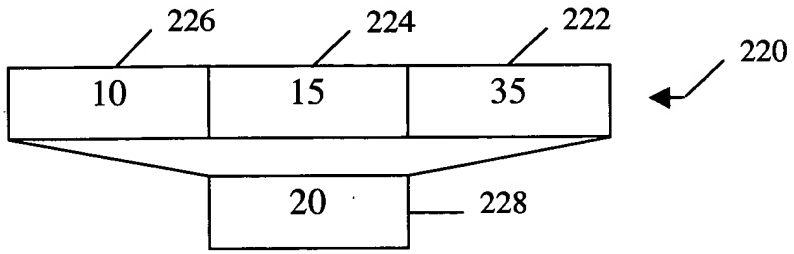


Fig 2D

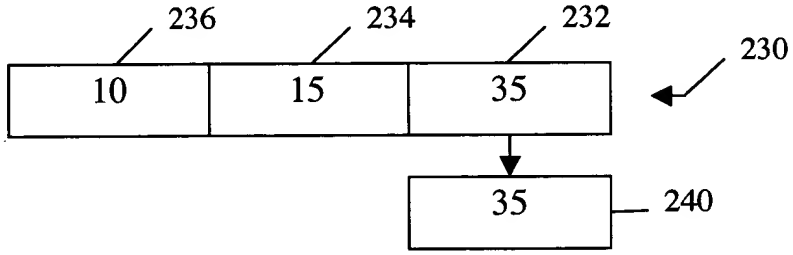


Fig 2E

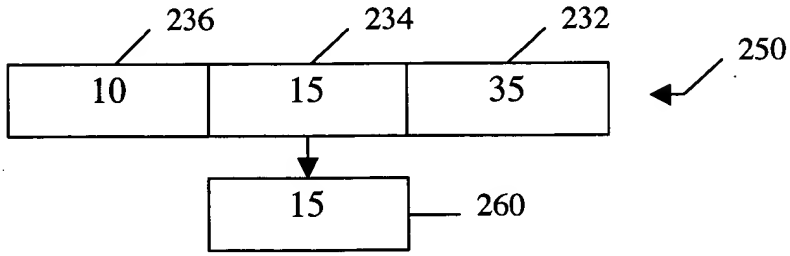


Fig 2F

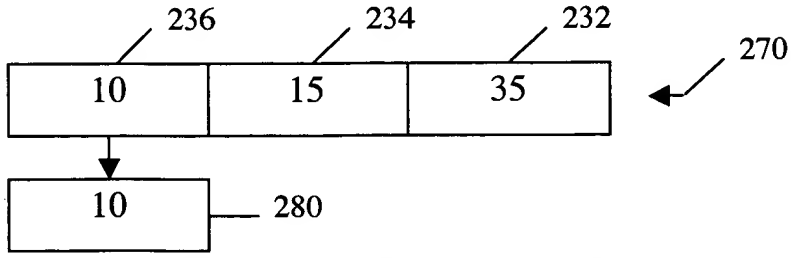


Fig 2G

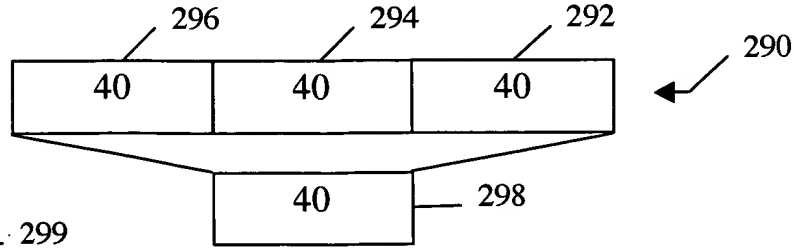
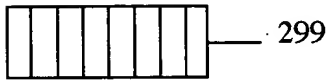


Fig 2H



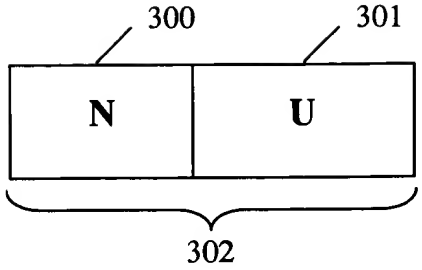

300
301
N
U
302

Fig 3A

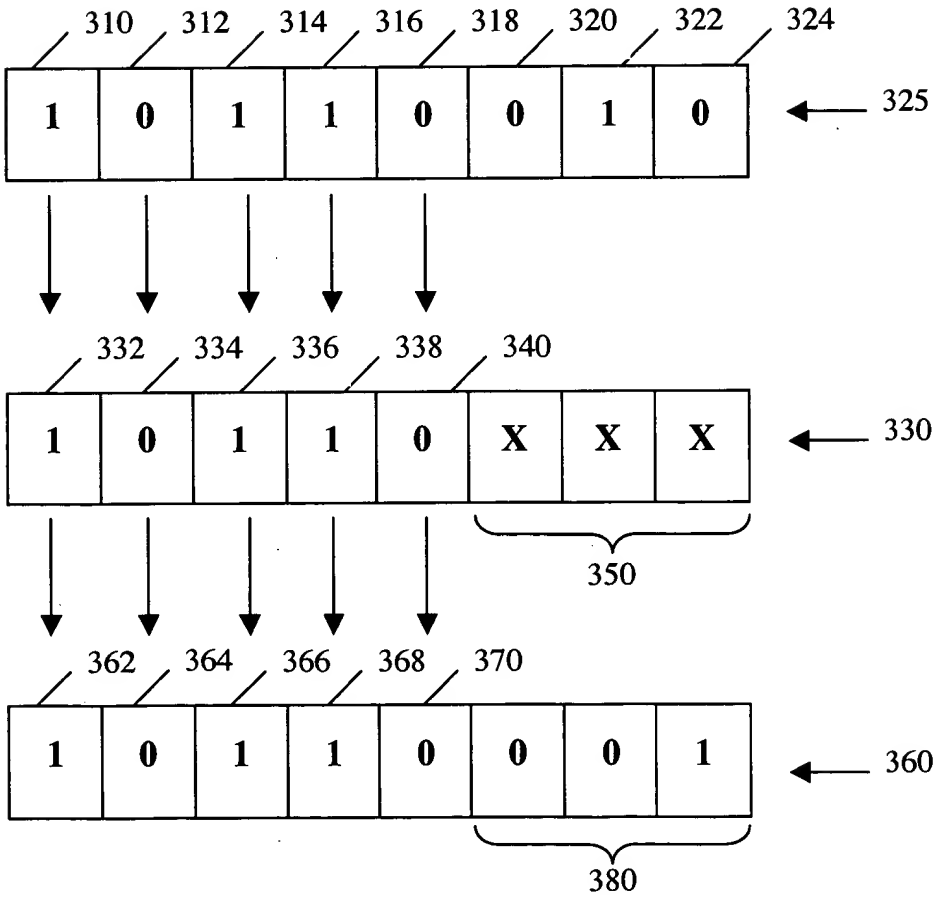
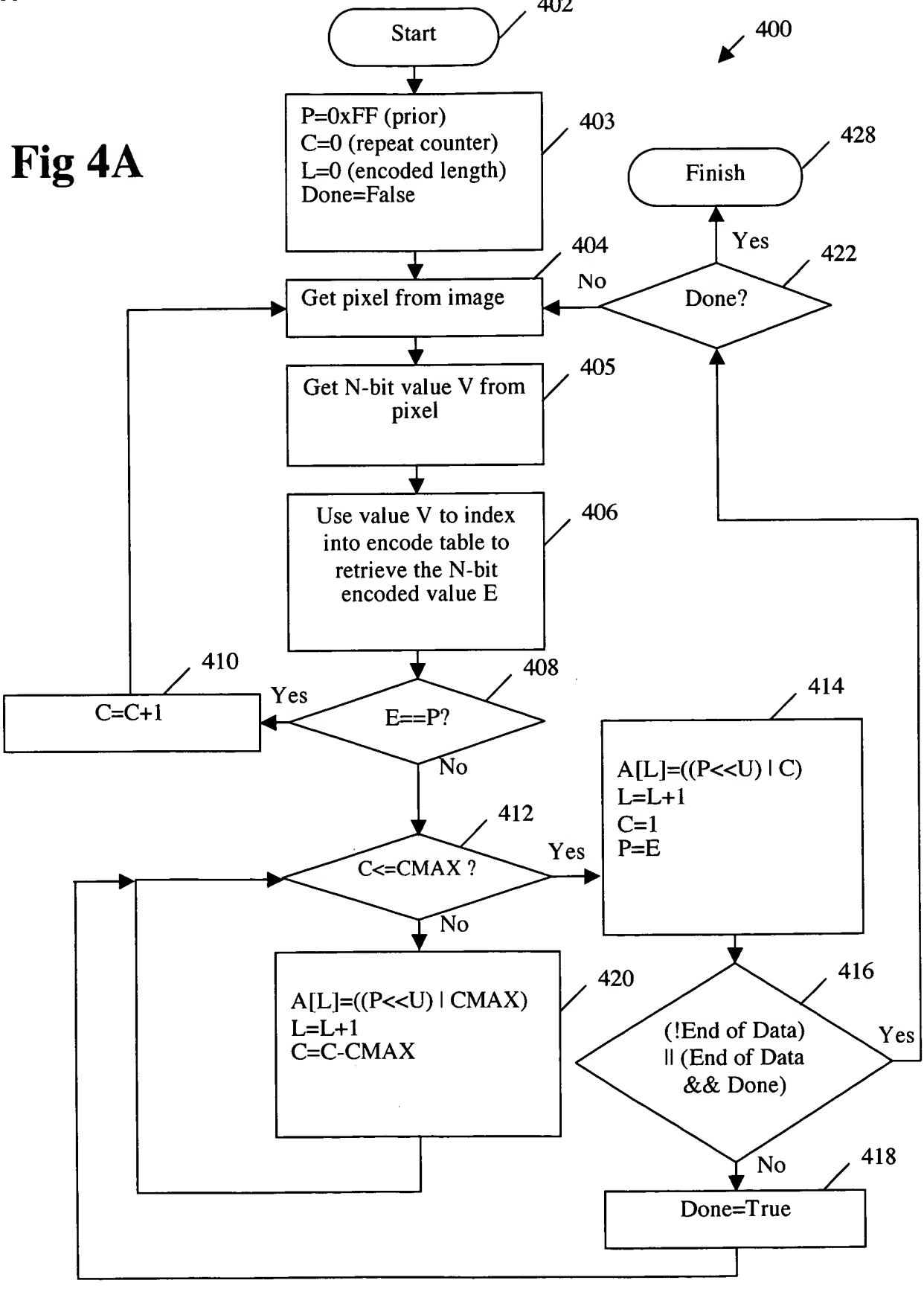

310 312 314 316 318 320 322 324
1 0 1 1 0 0 1 0
325
332 334 336 338 340
1 0 1 1 0 X X X
330
350
362 364 366 368 370
1 0 1 1 0 0 0 1
360
380

Fig 3B

Fig 4A


400
Start
402
P=0xFF (prior)
C=0 (repeat counter)
L=0 (encoded length)
Done=False
403
Get pixel from image
404
Get N-bit value V from pixel
405
Use value V to index into encode table to retrieve the N-bit encoded value E
406
E==P?
408
Yes
C=C+1
410
No
C<=CMAX ?
412
Yes
A[L]=((P<<U) | C)
L=L+1
C=1
P=E
414
No
A[L]=((P<<U) | CMAX)
L=L+1
C=C-CMAX
420
(!End of Data) || (End of Data && Done)
416
Yes
No
Done=True
418
Done?
422
No
Yes
Finish
428

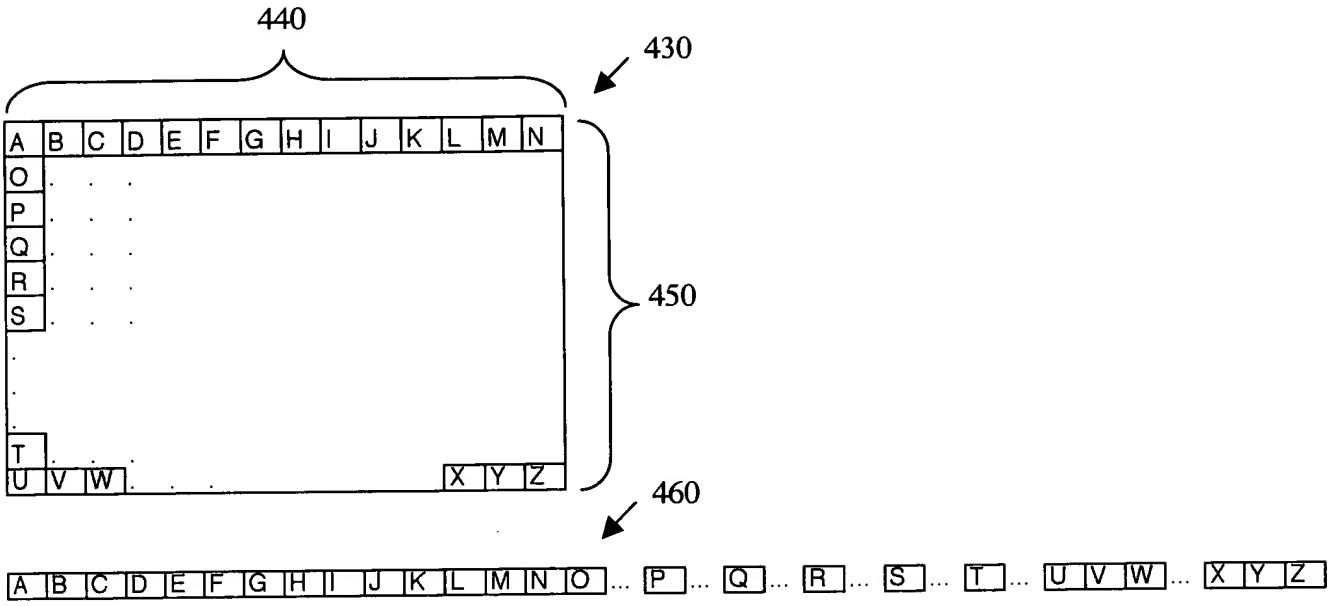

440
430
A B C D E F G H I J K L M N
O
P
Q
R
S
T
U V W
X Y Z
450
460
A B C D E F G H I J K L M N O ... P ... Q ... R ... S ... T ... U V W ... X Y Z

Fig 4B

RHN FORMAT

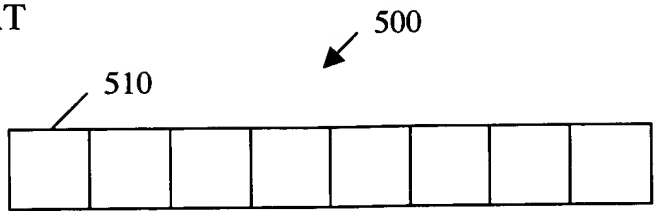


Fig 5A

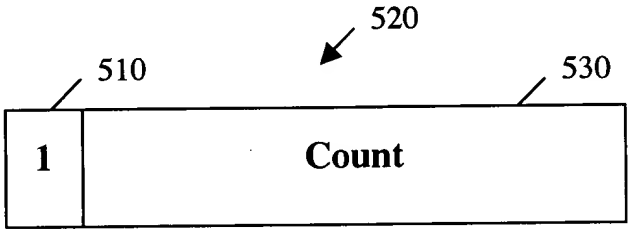


Fig 5B

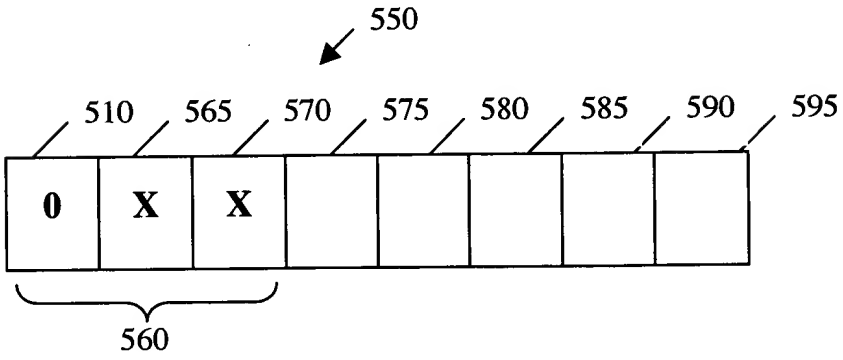


Fig 5C

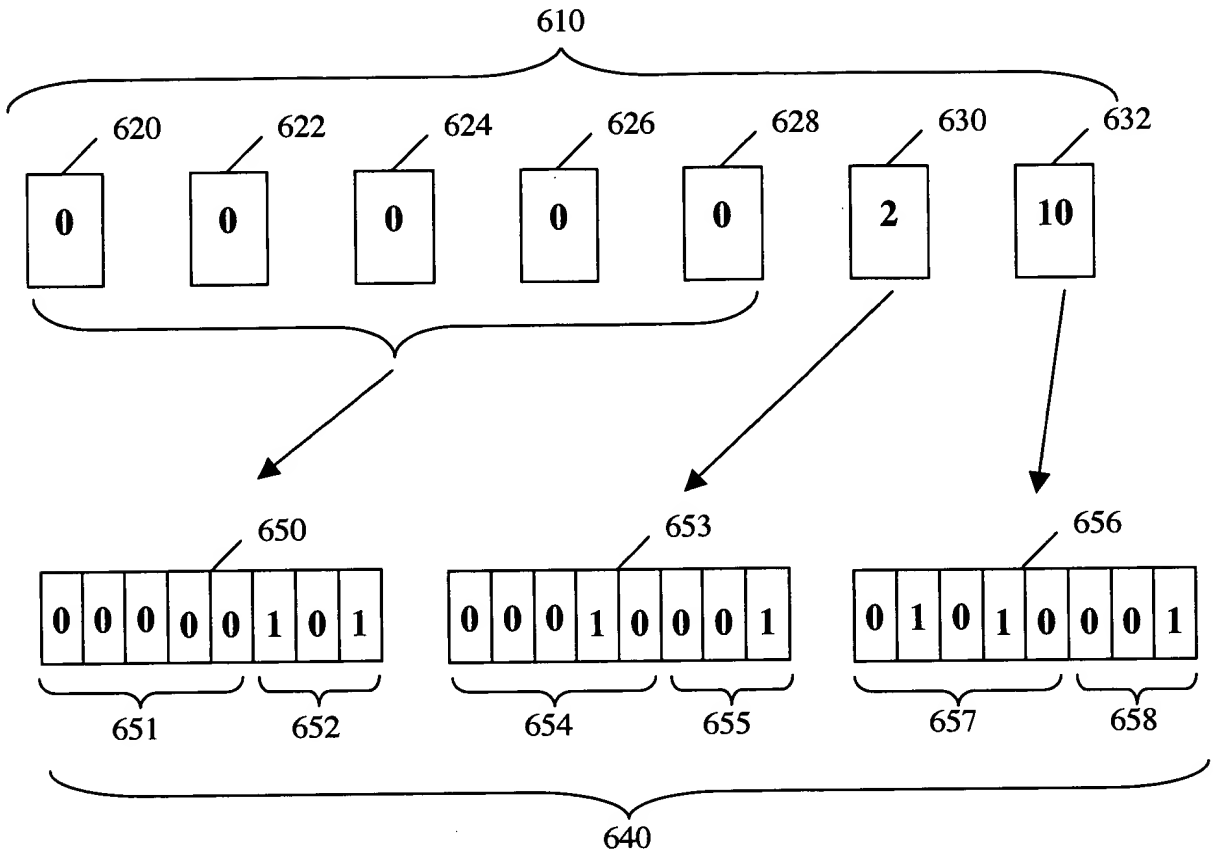

610
620
622
624
626
628
630
632
0
0
0
0
0
2
10
650
653
656
0 0 0 0 0 1 0 1
0 0 0 1 0 0 0 1
0 1 0 1 0 0 0 1
651
652
654
655
657
658
640

Fig 6

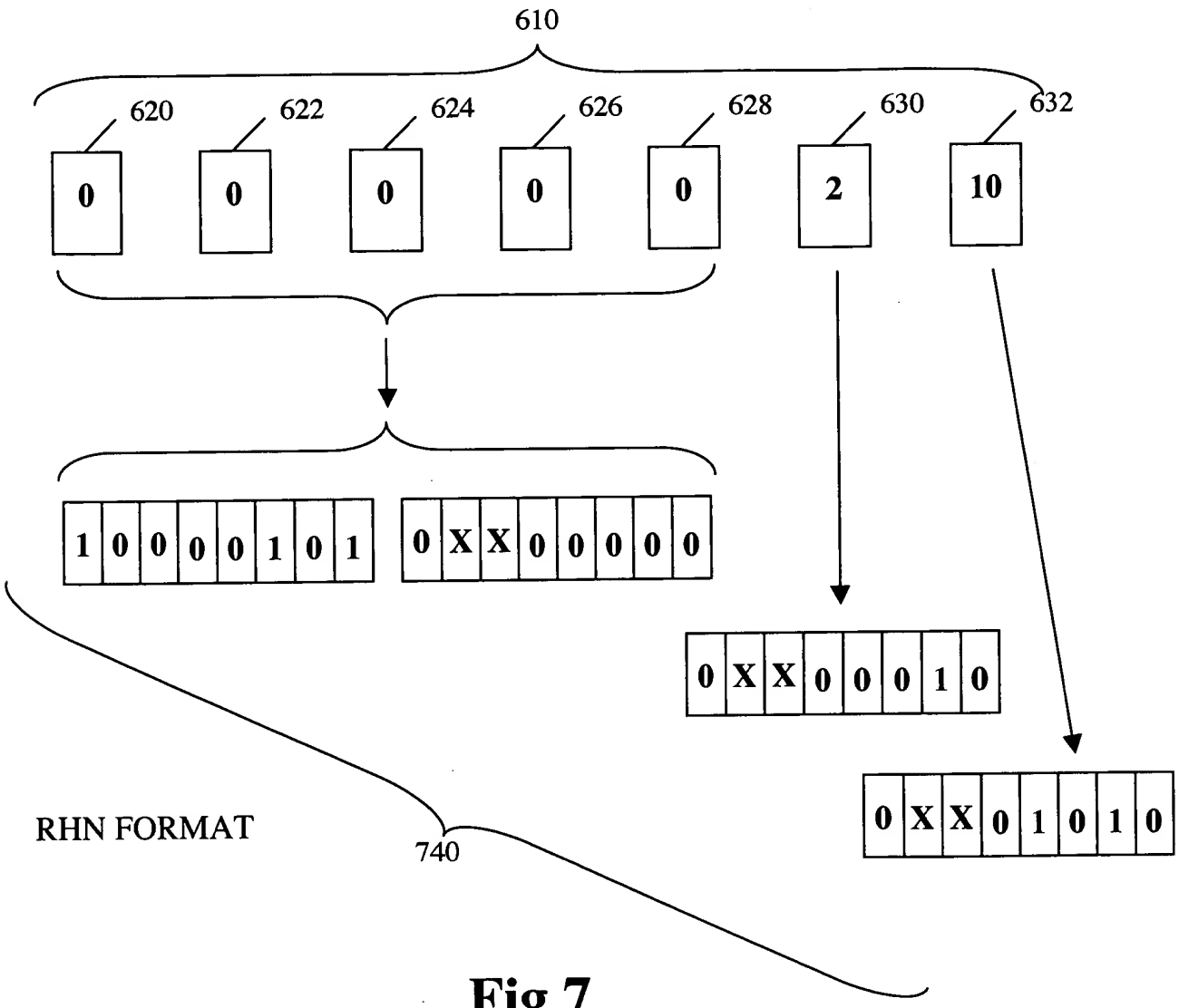

610
620
622
624
626
628
630
632
0
0
0
0
0
2
10
1 0 0 0 0 1 0 1
0 X X 0 0 0 0 0
0 X X 0 0 0 1 0
0 X X 0 1 0 1 0
RHN FORMAT
740

Fig 7

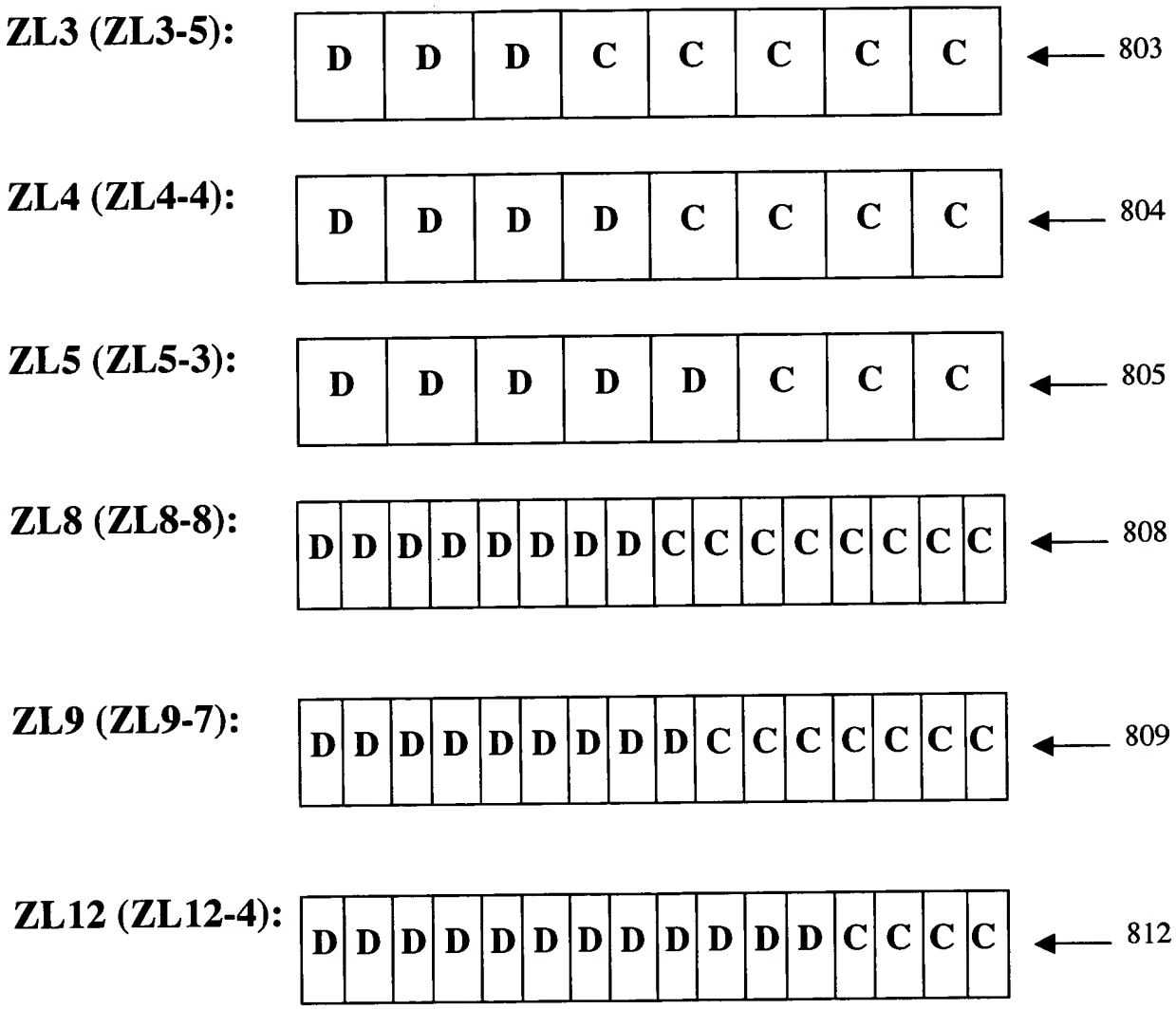

ZL3 (ZL3-5):
D D D C C C C C
803
ZL4 (ZL4-4):
D D D D C C C C
804
ZL5 (ZL5-3):
D D D D D C C C
805
ZL8 (ZL8-8):
D D D D D D D D C C C C C C C C
808
ZL9 (ZL9-7):
D D D D D D D D D C C C C C C C
809
ZL12 (ZL12-4):
D D D D D D D D D D D D C C C C
812

Fig 8A

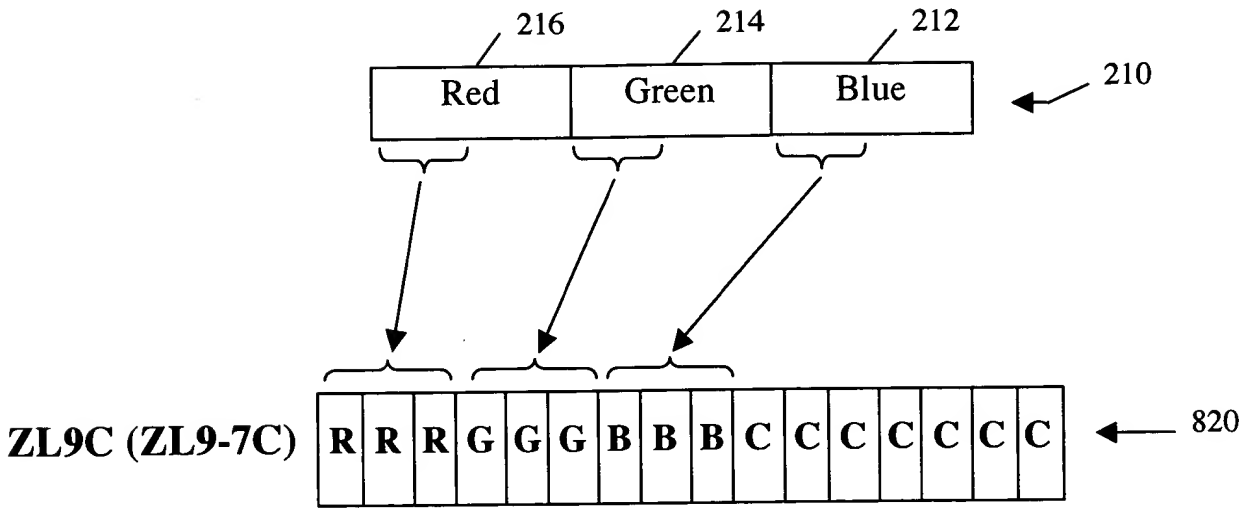
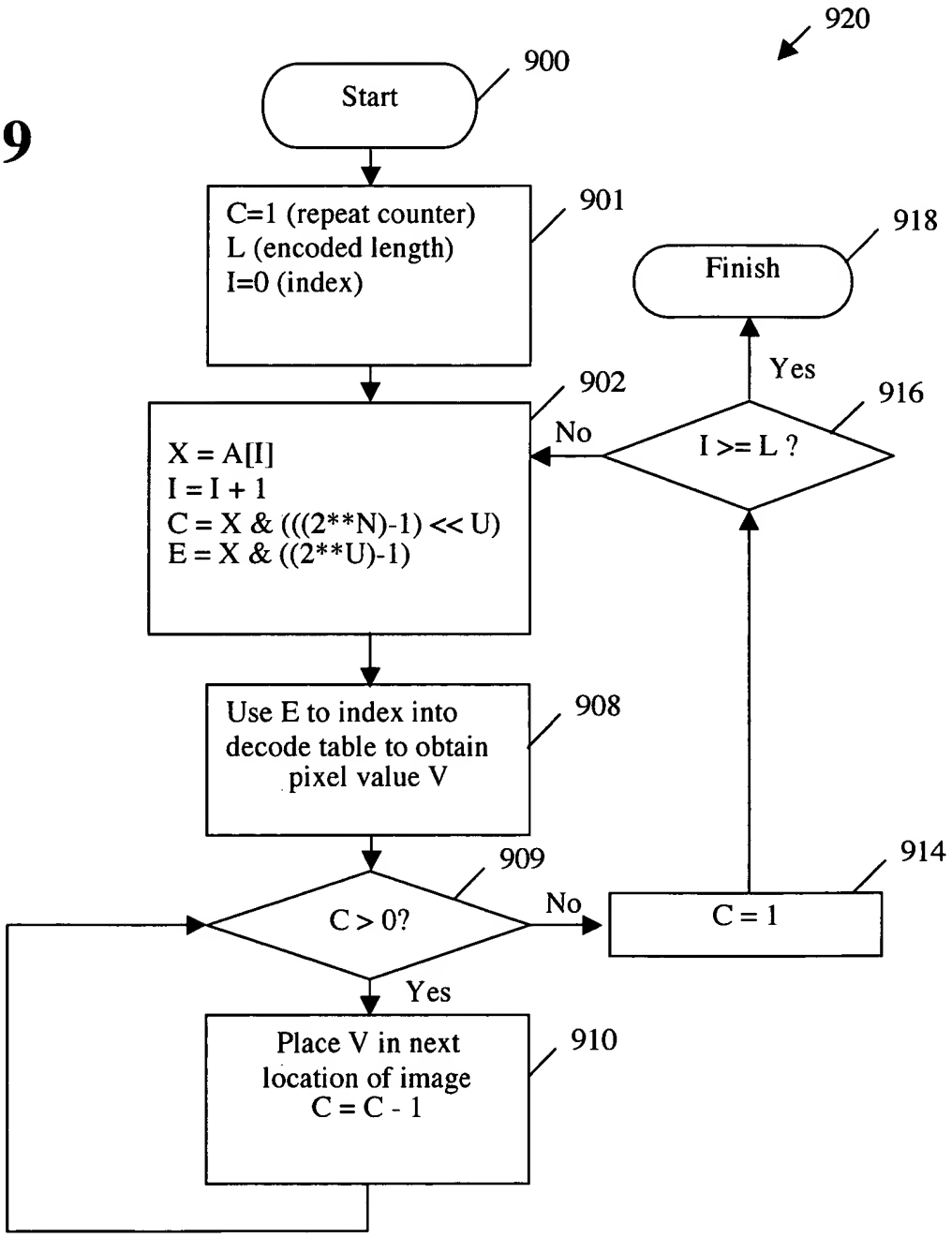

216
214
212
Red
Green
Blue
210
ZL9C (ZL9-7C)
R R R G G G B B B C C C C C C C
820

Fig 8B

Fig 9


920
900
Start
C=1 (repeat counter)
L (encoded length)
I=0 (index)
901
X = A[I]
I = I + 1
C = X & (((2**N)-1) << U)
E = X & ((2**U)-1)
902
Use E to index into
decode table to obtain
pixel value V
908
C > 0?
909
No
Yes
Place V in next
location of image
C = C - 1
910
C = 1
914
I >= L ?
916
No
Yes
Finish
918

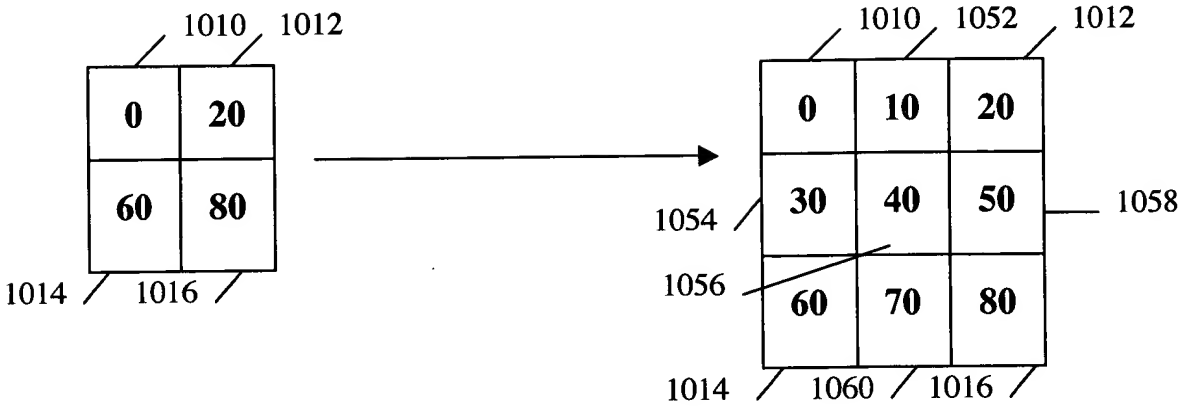

1010
1012
0
20
60
80
1014
1016
1010
1052
1012
0
10
20
30
40
50
1058
1054
1056
60
70
80
1014
1060
1016

Fig 10

1100

```
// N=3, W=8
unsigned char encodeTable[ ] =
{
      5, 0, 7, 4, 2, 3, 6, 1
};
```

Fig 11A

1110

```
// N=3, U=5
int decodeTable[ ] =
{
      0xff << 24 | 1 << (16+U) | 1 << (8+U) | 1 << U, // 0 → 1
      0xff << 24 | 7 << (16+U) | 7 << (8+U) | 7 << U, // 1 → 7
      0xff << 24 | 4 << (16+U) | 4 << (8+U) | 4 << U, // 2 → 4
      0xff << 24 | 5 << (16+U) | 5 << (8+U) | 5 << U, // 3 → 5
      0xff << 24 | 3 << (16+U) | 3 << (8+U) | 3 << U, // 4 → 3
      0xff << 24 | 0 << (16+U) | 0 << (8+U) | 0 << U, // 5 → 0
      0xff << 24 | 6 << (16+U) | 6 << (8+U) | 6 << U, // 6 → 6
      0xff << 24 | 2 << (16+U) | 2 << (8+U) | 2 << U  // 7 → 2
};
```

Fig 11B

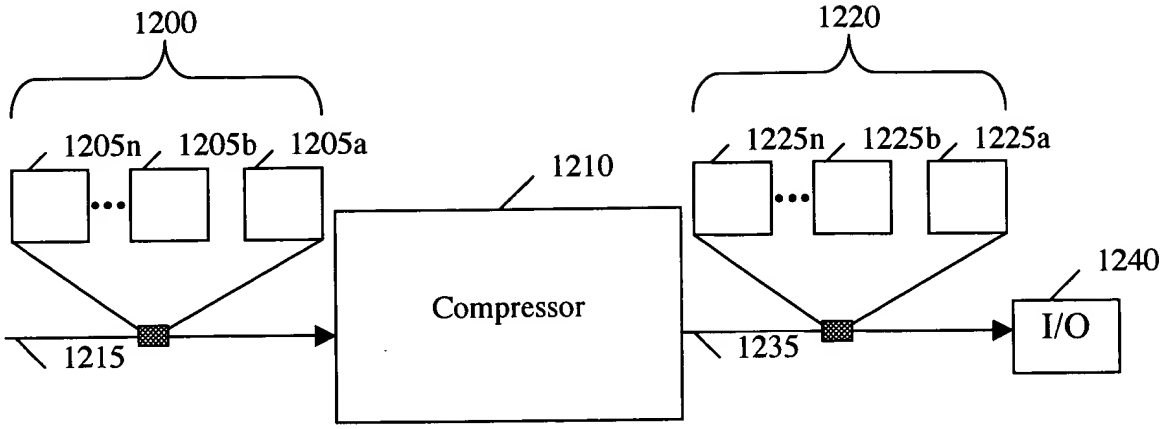


Fig 12A

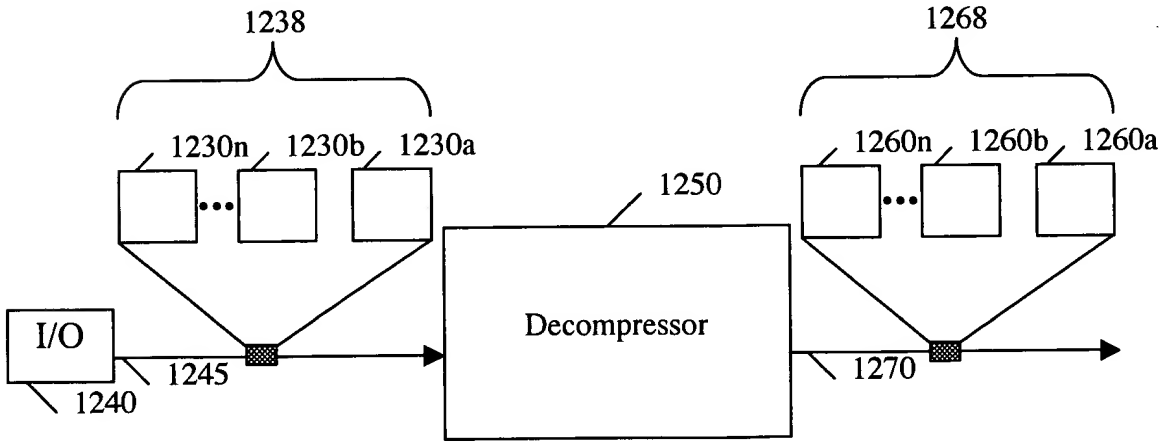


Fig 12B

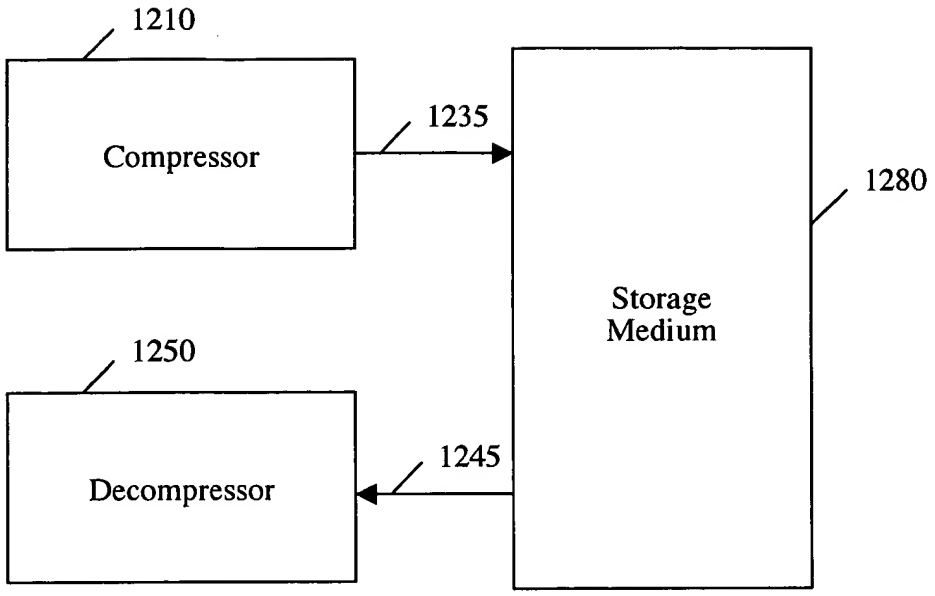


Fig 12C

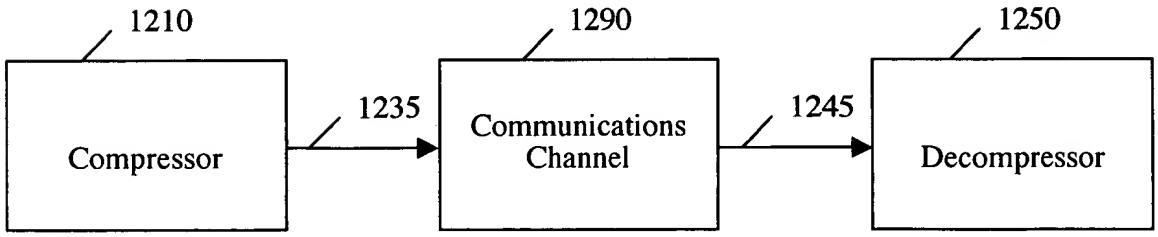


Fig 12D

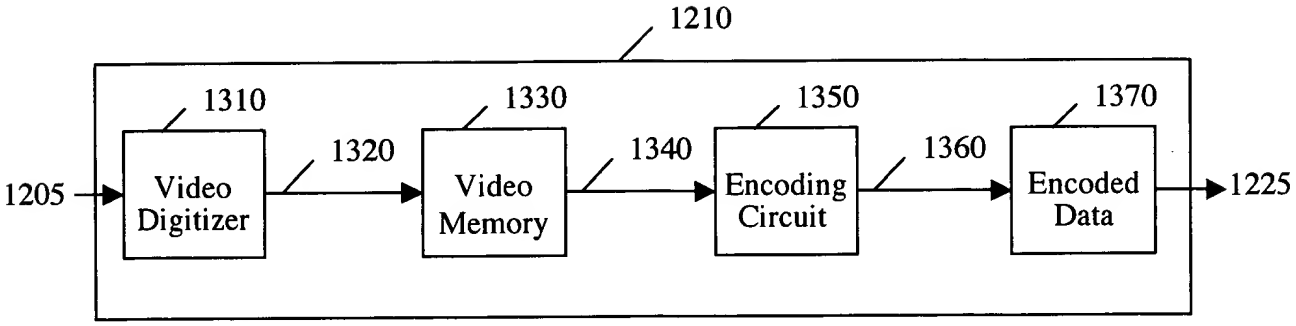


Fig 13A

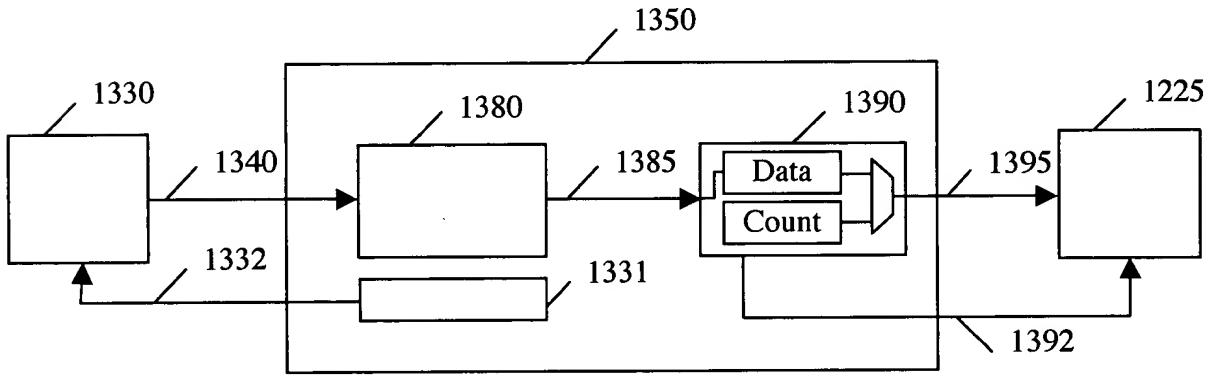


Fig 13B

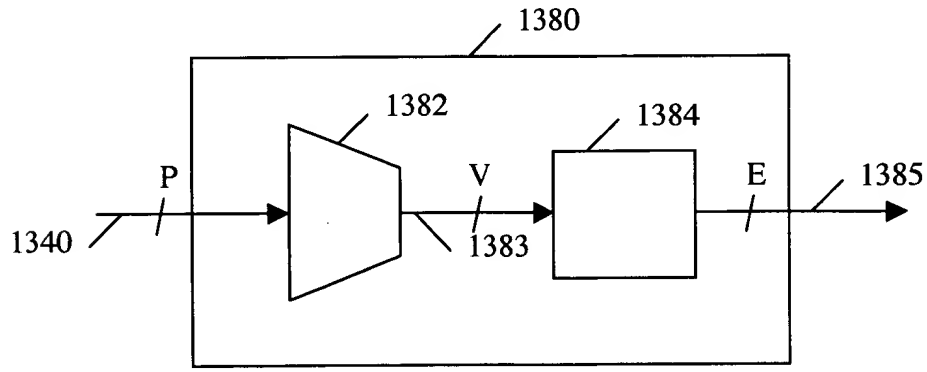


Fig 13C

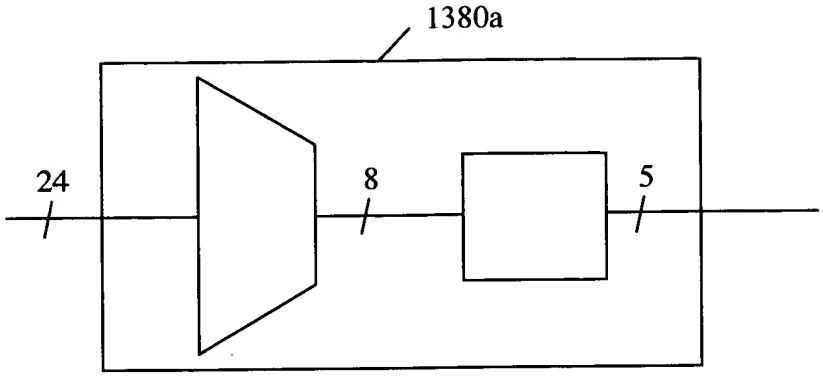


Fig 13D

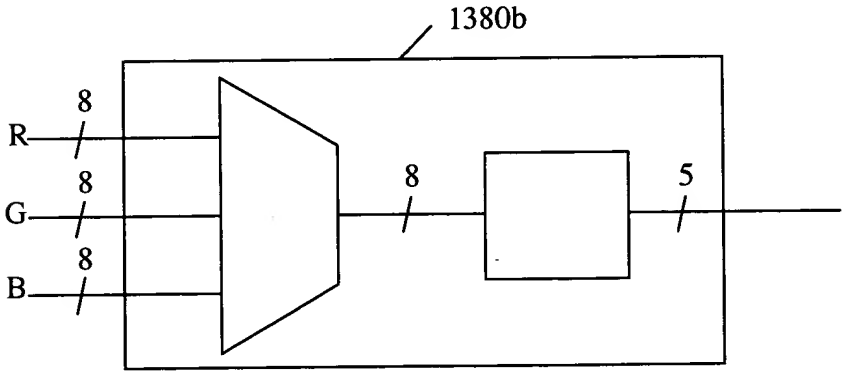


Fig 13E

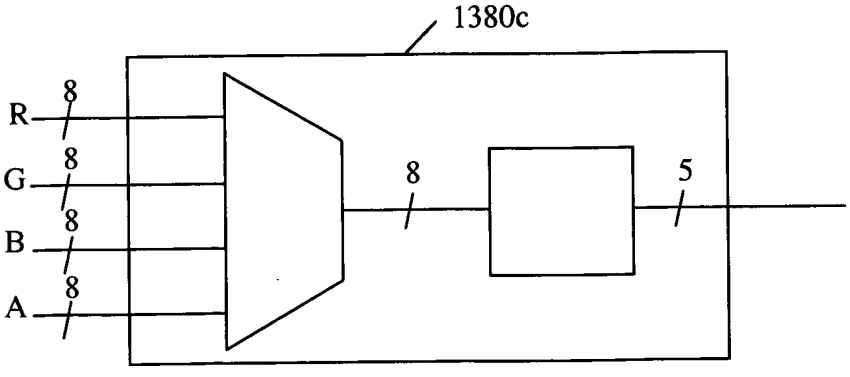


Fig 13F

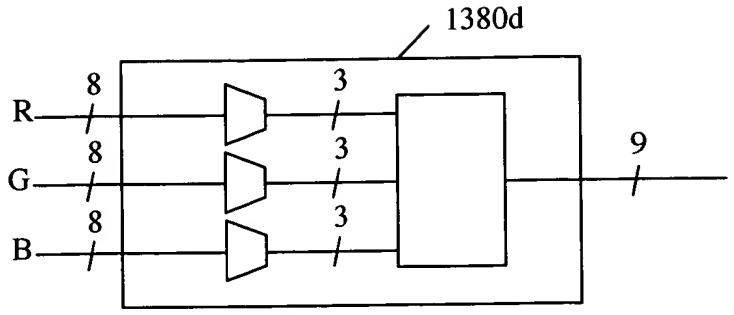


Fig 13G

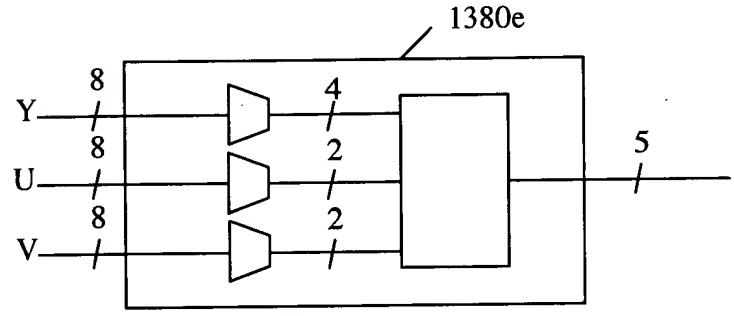


Fig 13H

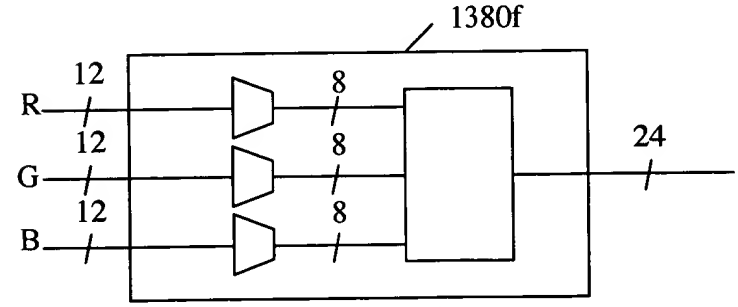


Fig 13I

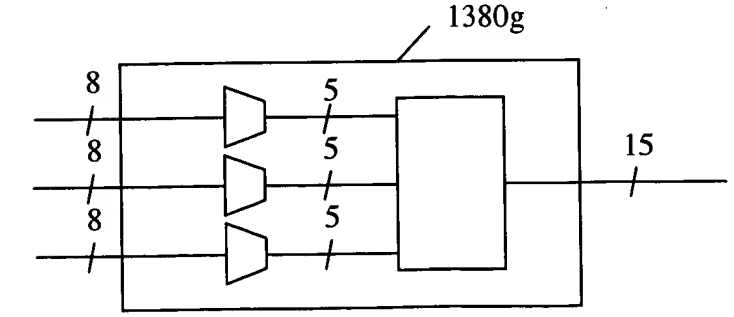


Fig 13J

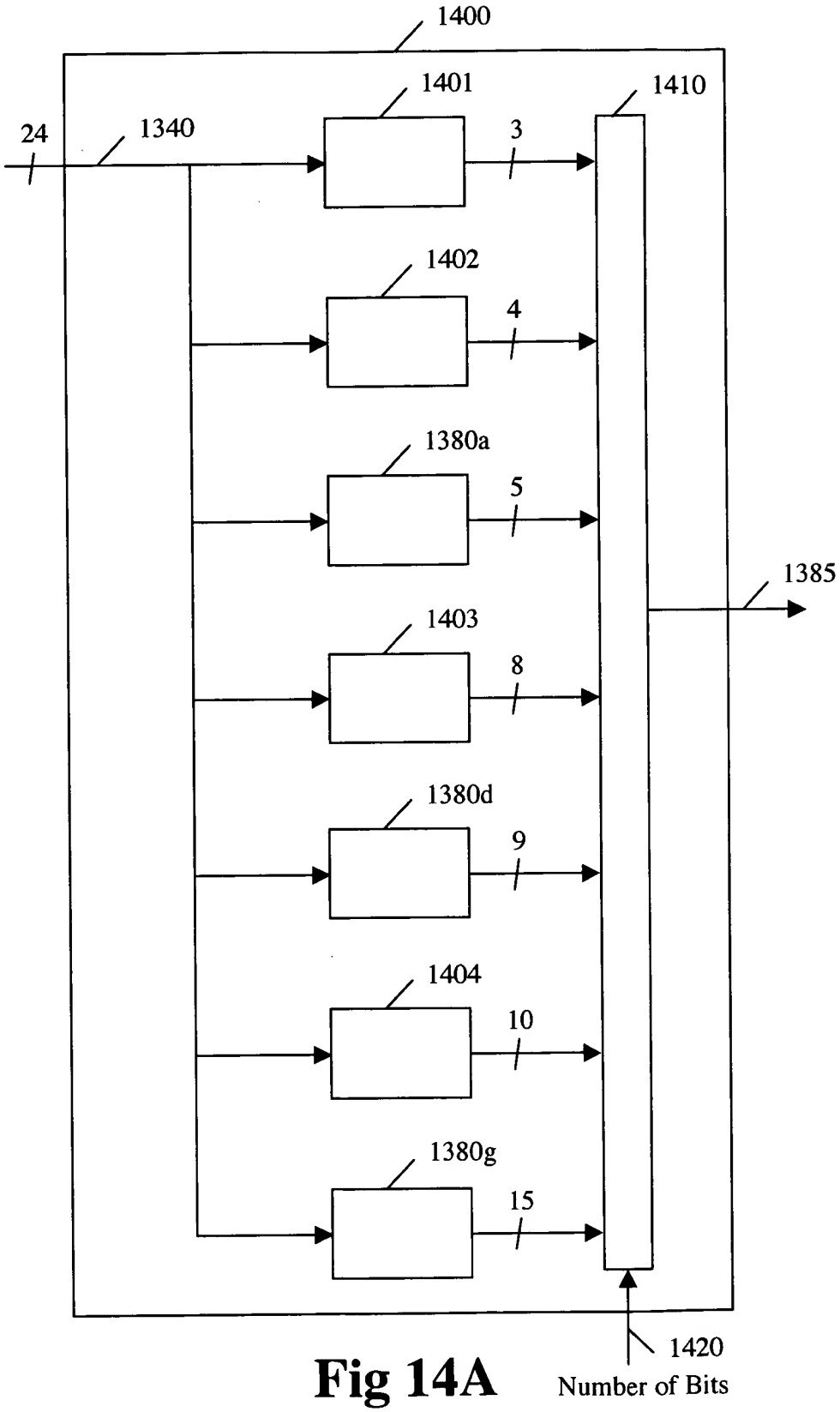

1400
1401
1410
24
1340
3
1402
4
1380a
5
1385
1403
8
1380d
9
1404
10
1380g
15
1420
Number of Bits

Fig 14A

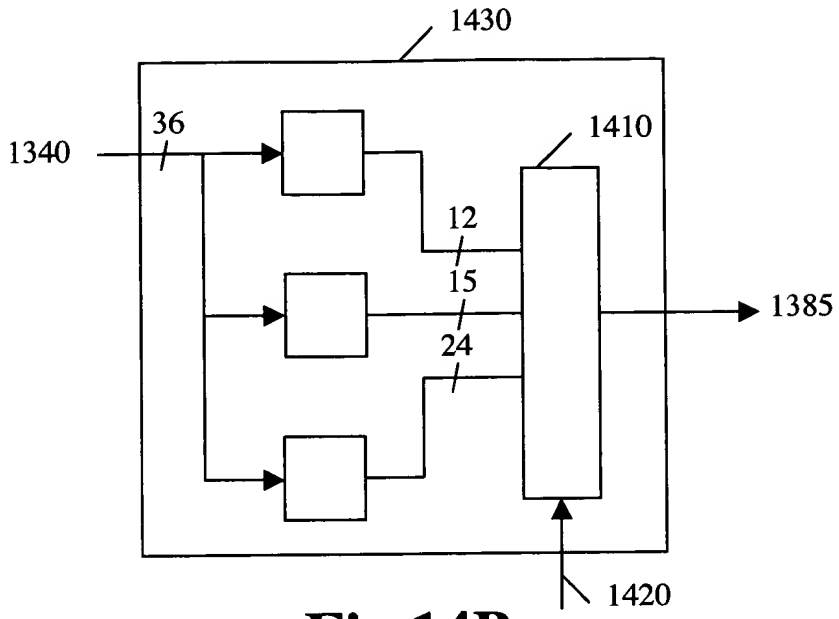


Fig 14B

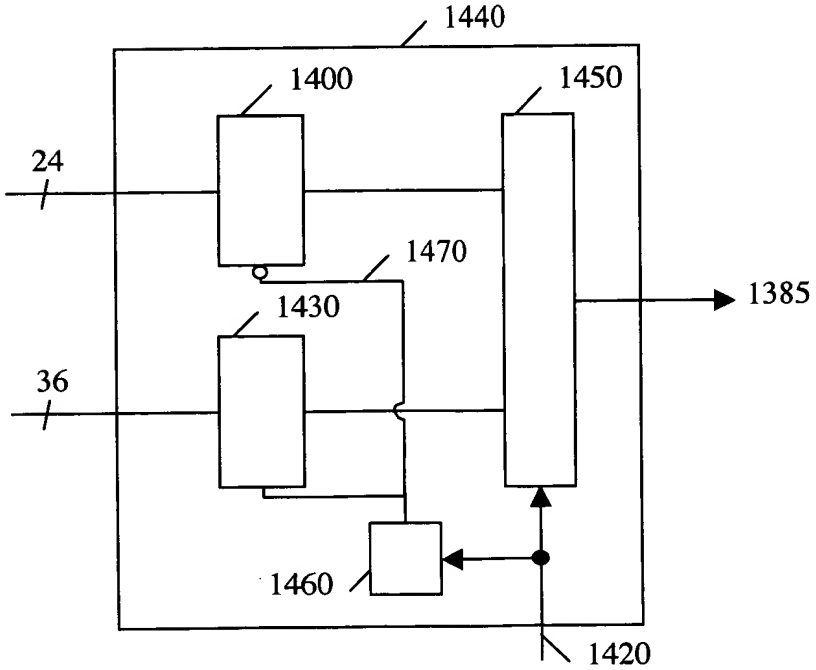


Fig 14C

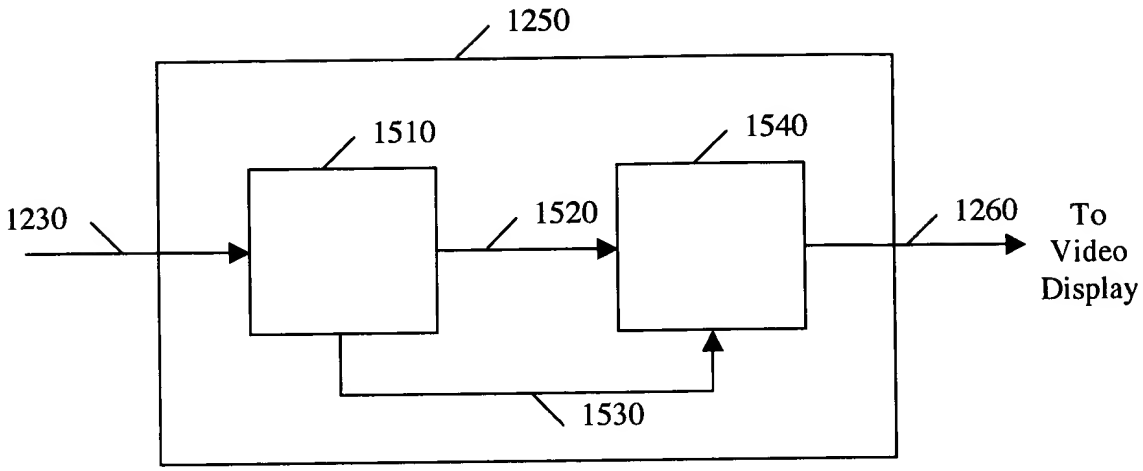


Fig 15

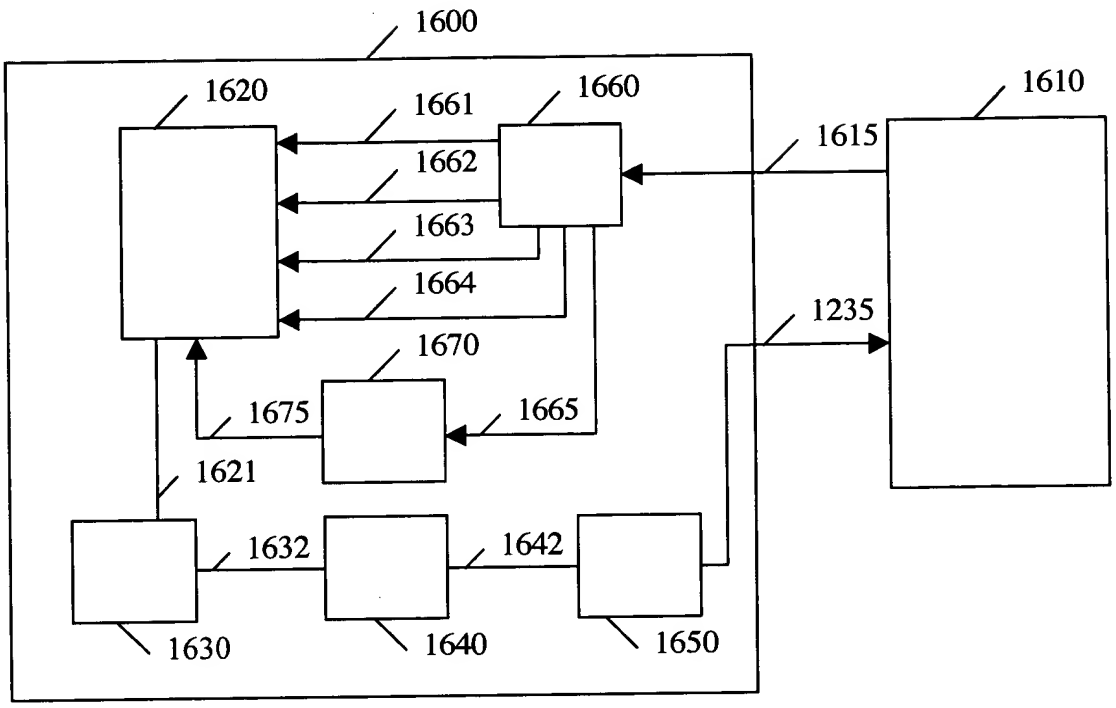


Fig 16A

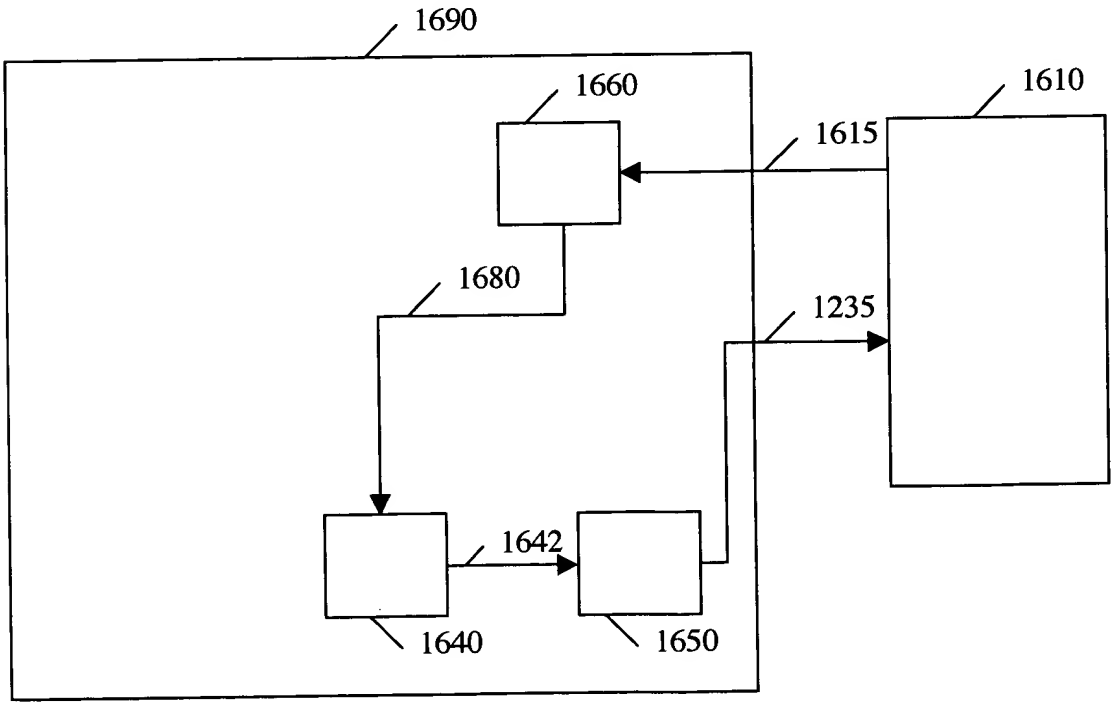


Fig 16B

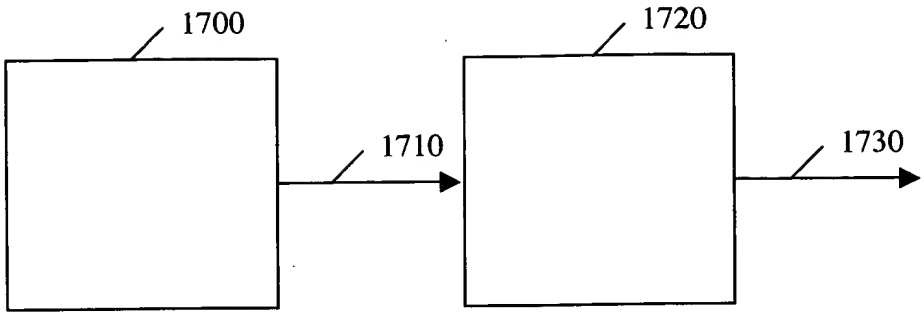


Fig 17

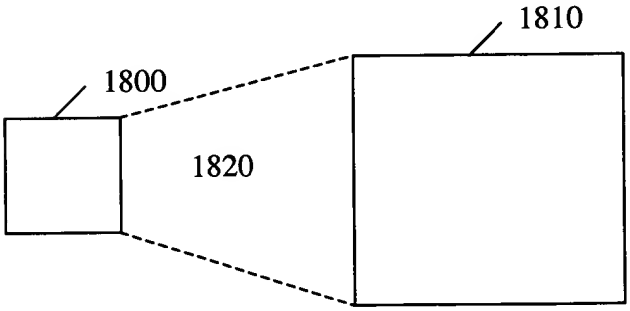
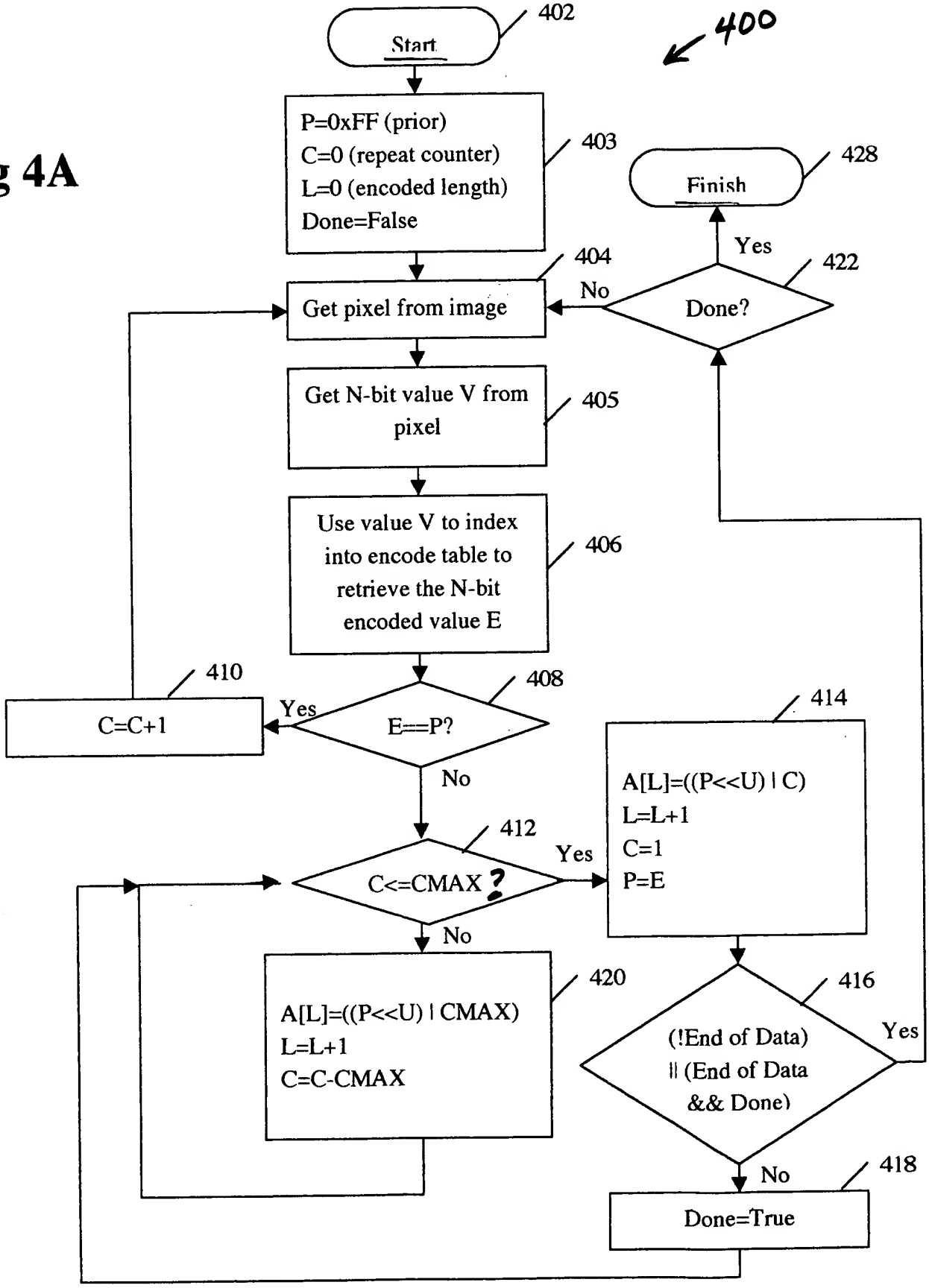


Fig 18

09/467,721 Changes

Fig 4A



09/467,721 changes

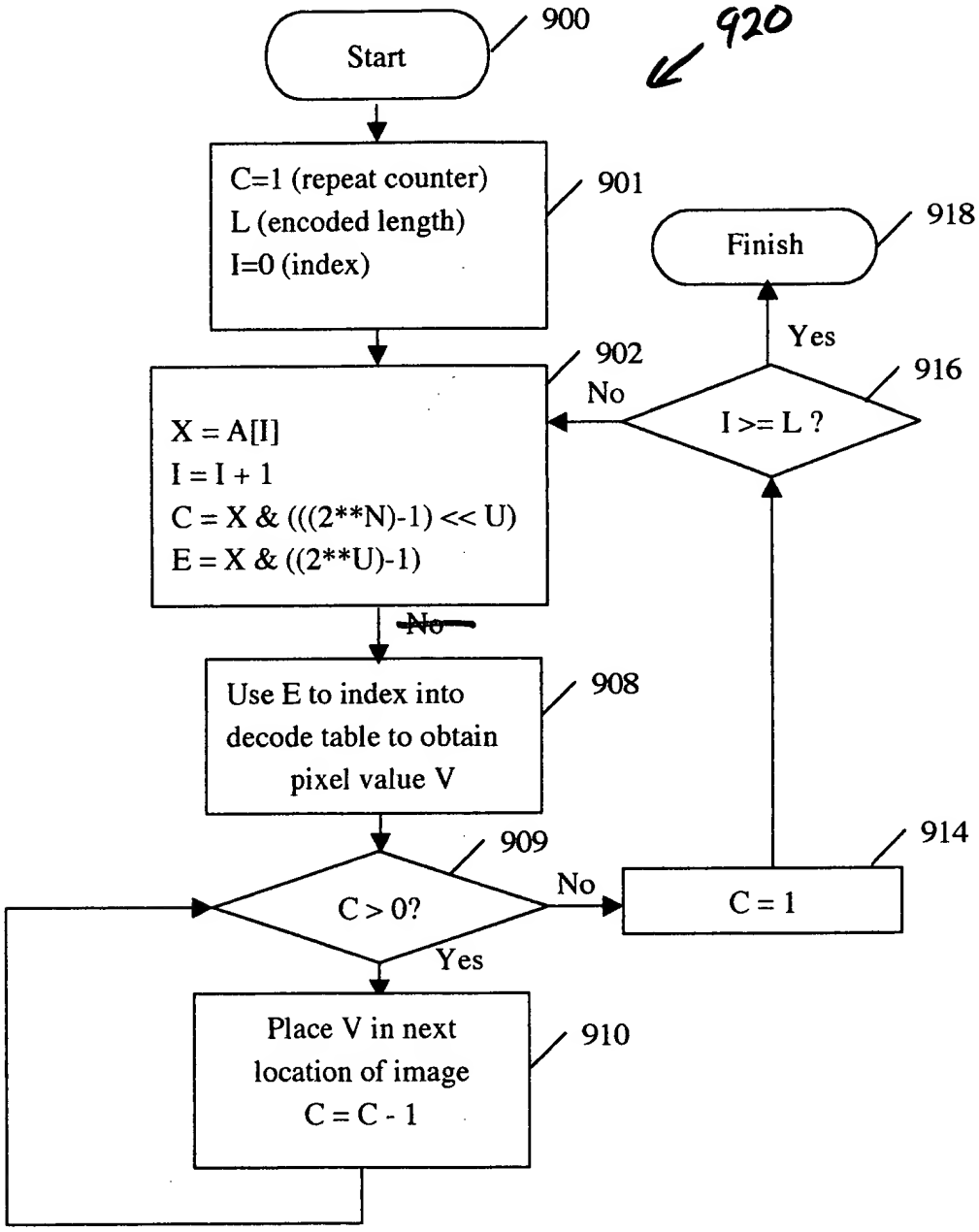



Fig 9